



**APPLICATION**  
**OF**  
*BLYTH BIGGS*  
**FOR**  
**UNITED STATES PATENT**  
**ON**  
**UTILITY TOOL HANDLE**

NUMBER OF DRAWINGS: ONE SHEET

DOCKET NUMBER: 03-0830

HERBERT C. SCHULZE  
PATENT OFFICE REGISTERED # 18,173  
2790 WRONDEL WAY, PMB36  
RENO, NV 89502  
( 775 ) 826 - 3447

**TITLE OF THE INVENTION**

Utility Tool Handle

CROSS REFERENCE TO RELATED PATENT APPLICATIONS

This application is not related to any other presently pending application of mine.

## **BACKGROUND OF THE INVENTION**

### **I. FIELD OF THE INVENTION**

This invention is in the general field of utility hand tools such as rakes, hoes, shovels, brooms, mops, and the like;

The invention is more particularly in the field of ergonomic handles for utility hand tools having elongate handles.

### **II. DESCRIPTION OF THE PRIOR ART**

For many years I have been personally engaged in such activities as janitorial work, gardening, soil preparation, and the like. In my work I have used tools and implements such as rakes, hoes, shovels, brooms, mops, and the like. I am familiar with the many different types of handles for such items. Over a long period of time I have sought for the most ergonomic friendly handles for such implements and tools.

I co-invented the ergonomic mop handle illustrated in United States Patent No. 5,920,944. I have also made other ergonomically friendly tools and implements.

There have been many developments in handles for tools and the like. I have studied this field carefully including commercially available items, product catalogs and other literature and patent data bases.

I have concluded that there is no properly applicable prior art as to this new tool and implement.

### SUMMARY OF THE INVENTION

Janitorial service, gardening, soil preparation and the like are common, and necessary activities. My brother and I have previously developed a unique mop handle (U.S. Pat. No. 5,920,944 referred to above). I applied that mop handle to a rake and learned that the action of raking and mopping are perhaps somewhat opposite to one another.

However, on further study I determined that some of the same considerations which led to the development of our basic ergonomic mop and mop handle applied to raking and the like, but involving different applications of stress and the like to the muscles.

Therefore, I made a careful study of the physical stresses on the body in such activities as gardening and the like. I also determined that there are considerable differences between the stresses placed on right and left handed persons.

After considerable work on rakes of various types, I once again turned to the ergonomic principles involved and have now developed a utility tool handle which works with rakes of all types and numerous other domestic tools. I have now finally perfected the present invention of a unique and very useful ergonomic utility tool handle. It is now possible, as a result of my present invention, to reduce the fatigue and repetitive motion injuries and the undue strain previously encountered by persons

involved with raking and hoeing and numerous other activities.

It is an object of this invention to provide a new, useful, and unique utility tool handle which will relieve strain and repetitive motion injuries for persons using utility tools;

Another object of this invention is to provide such a handle which is useful in making the use of utility tools more effective;

Another object of this invention is to provide such a utility tool handle which can be utilized equally effectively by right or left handed persons.

The foregoing and other objects and advantages of this invention will become apparent to those skilled in the art upon reading the description of a preferred embodiment, which follows, in conjunction with a review of the appended drawings.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic perspective of a preferred embodiment of a utility tool handle of this invention attached to a hoe; and

Fig. 2 is a schematic perspective of a person using the handle and hoe of fig.1.

## DESCRIPTION OF A PREFERRED EMBODIMENT

An inventory of items on the drawings bearing reference numerals is:

<u>Numeral</u>	<u>Item</u>
10	ergonomic utility tool handle, generally
11	straight segment of handle in phantom
12	end covering
12a	finger-holds
13	curved segment
14	straight segment
15	curved segment
15a	curved segment
16	straight segment partially in phantom
17	hand grip covering
18	straight segment
19	fasteners
20	tool attachment member
21	hoe blade
22	person
23	right hand
24	left hand
25	right arm
26	right shoulder
27	left arm
28	ground surface



The new utility tool handle 10 of this invention is shown in Fig. 1. It consists of rod or pipe specially shaped as shown and described. I prefer a hollow cylindrical tube of aluminum although any suitable elongate member would do as will be clear to those skilled in the art.

The tube or the like is shaped as follows: an initial straight segment 11 is about four inches in length. The segment 11 has a shaped covering 12 having a series of finger-holds 12a on its underside.

A curved segment 13 approximately four or five inches long extends to a straight segment 14 about six inches long which is in a plane roughly perpendicular to segment 11.

A curved segment 15 about two inches long leads to straight segment 16 which is about seven inches long, shown partly in phantom as it is partially covered by handgrip 17 which is preferably formed of foam rubber or the like.

Curved segment 15a (shown in phantom) is the same as curved segment 15 but in the reverse direction in order to provide a transition to straight segment 18 which is in a plane parallel to segment 14 and is from about 24 to 40 inches long depending upon the length of the tool attachment member 20 which can be a tube or the like which telescopes into straight segment 18 and is held in place by fasteners 19 which are bolts or the like as will be known to those skilled in the art.

In this illustration the hoe blade 21 depends from the tool

attachment member as shown.

Fig. 2 shows the mode of use of this invention and illustrates its particular advantages. A person 22 grips the upper handle covering with his right hand 23 in such manner that he can exert maximum pulling power through his right arm 25 and right shoulder 26. At the same time, the person can exert maximum pressure downwardly by the hoe blade 21 against the earth 28 by essentially straight-arming through his left arm 27.

The way this utility tool handle has been designed, and with the hand grips as described a right handed person or a left handed person can use the handle with maximum results.

By this reference I hereby incorporate the claims and abstract which follow within this description of a preferred embodiment the same as though they were fully set forth at length at this point.

While the embodiment herein set forth is fully capable of achieving the objects and advantages desired, it is to be understood that such embodiment has been set forth for purposes of illustration only and not for purposes of limitation.